



# Replacement Sheet

Appln. No. 09/873,041

Method And System For Semiconductor Crystal Production With Temperature Management

Michael Heuken, et al.

SSJR File 03345-P0017A

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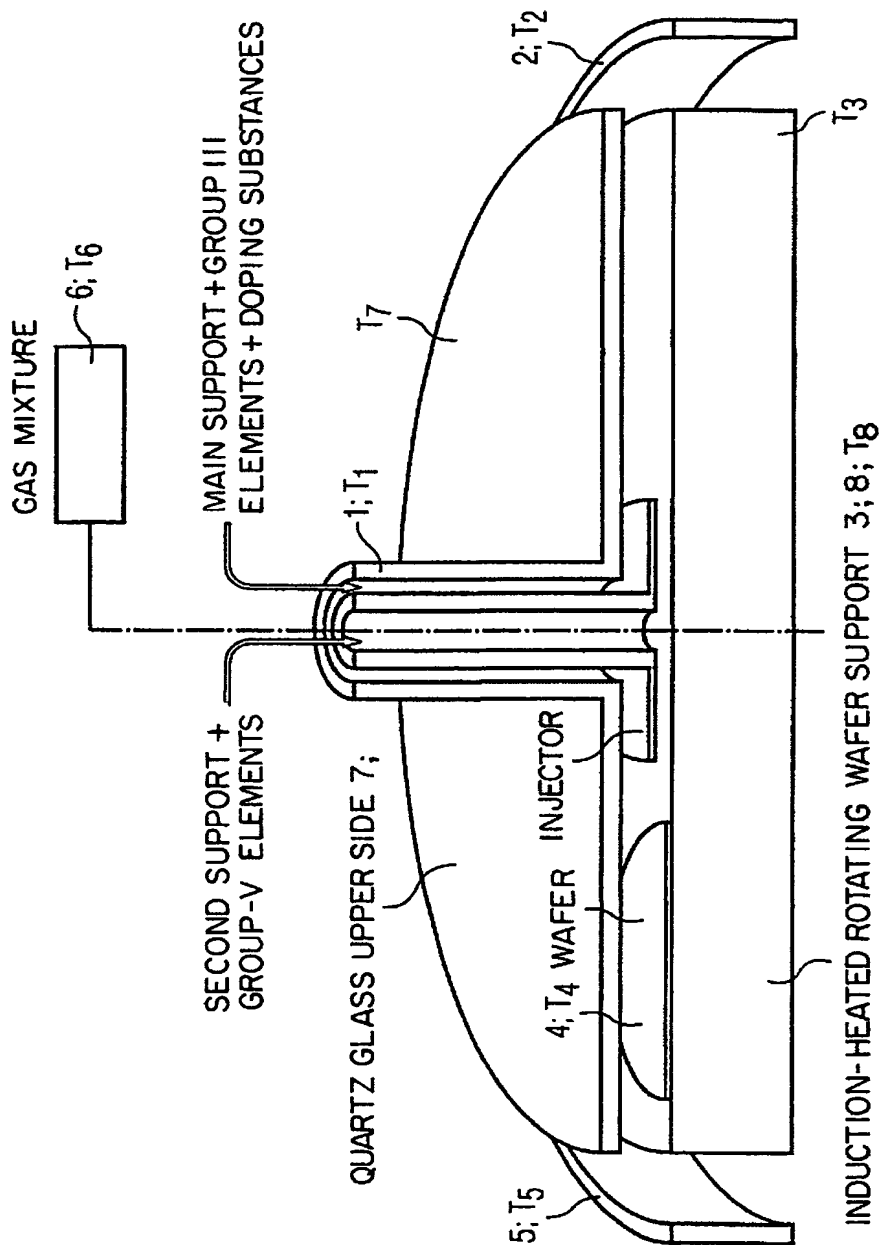
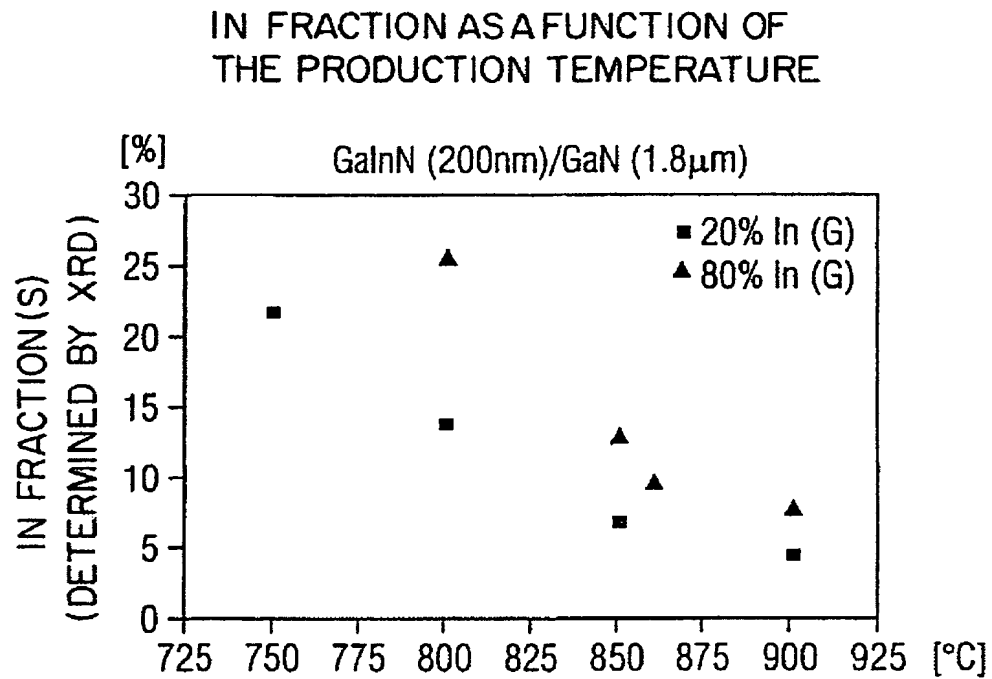


FIG. 1



**FIG. 2**

LOG DATA OF THE AIXTRON MOVPE SYSTEM  
InGaN/GaN DH STRUCTURE

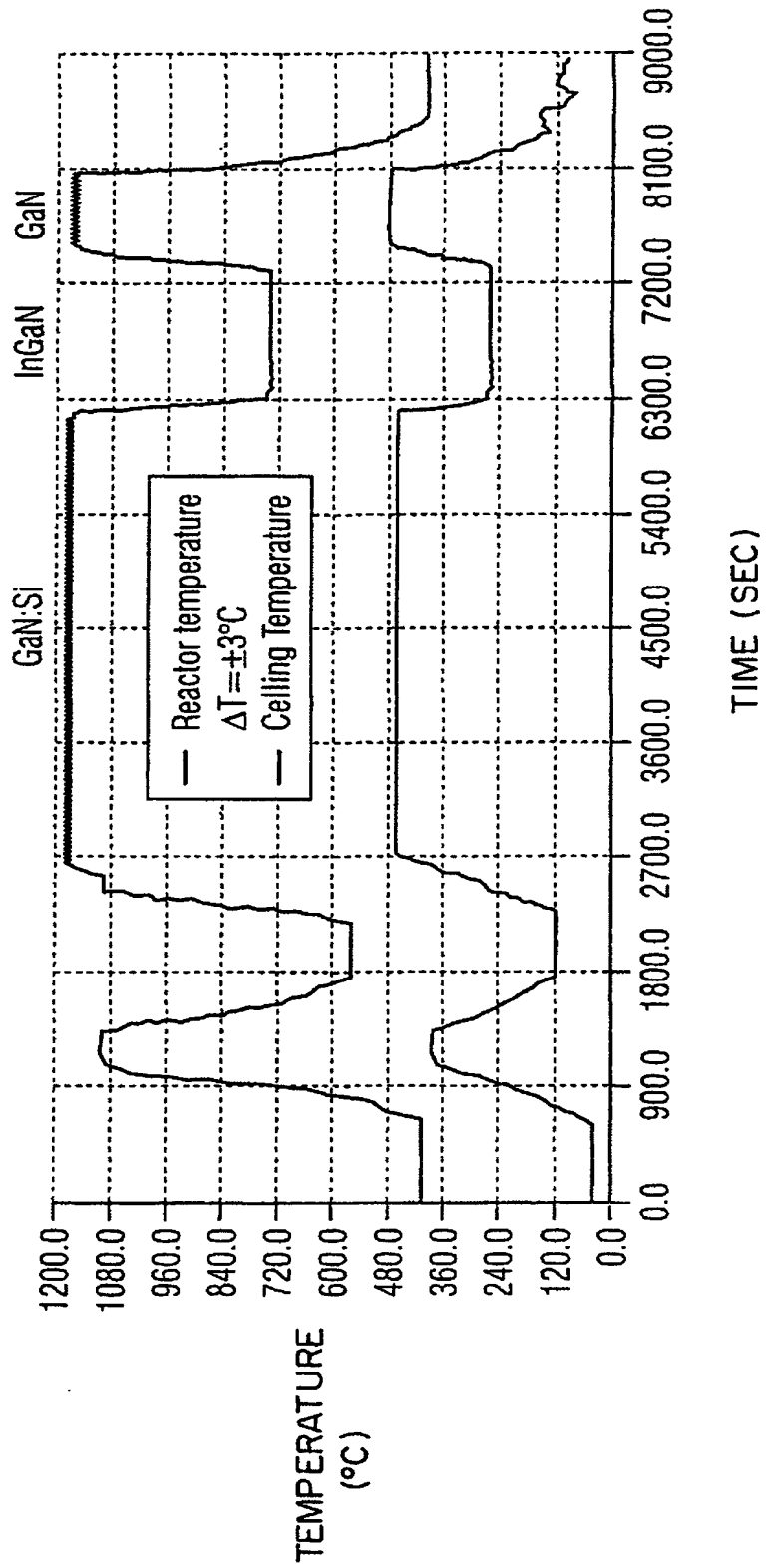


FIG. 3

MASS TRANSFER MODEL  
 SCHEMATIC ILLUSTRATION THE COMPUTING RANGE AND THE  
 FINITE VOLUME LATTICE FOR ANALYZING THE MASS TRANSFER

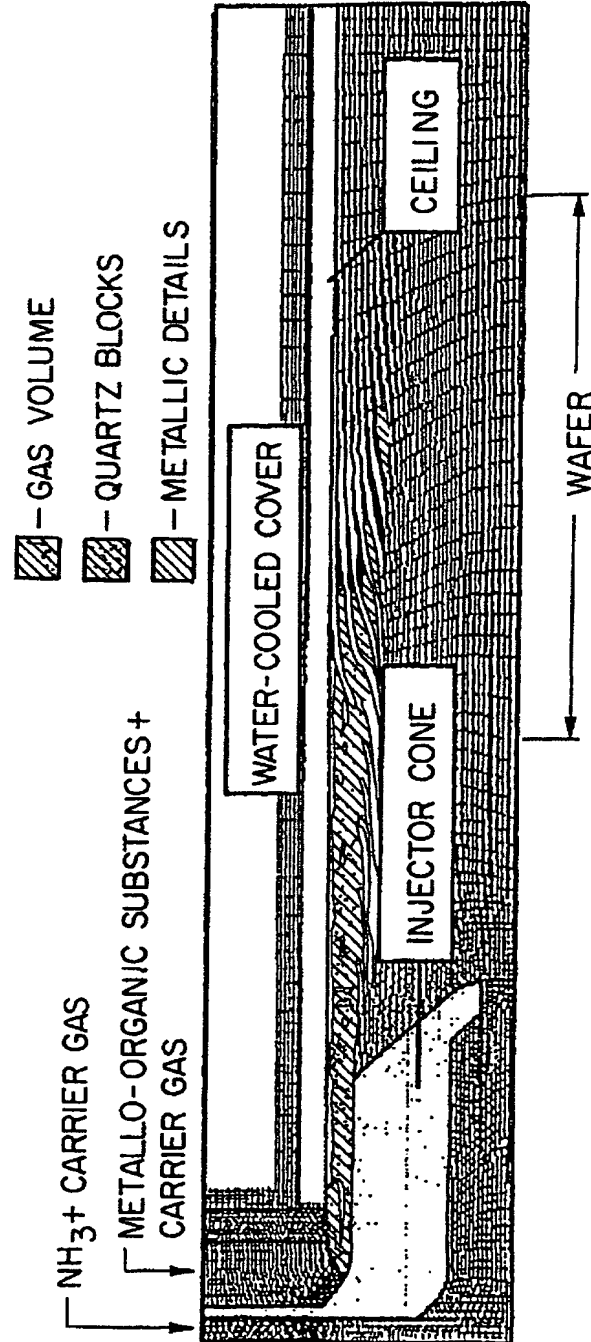


FIG. 3a

# TEMPERATURE DISTRIBUTION

## THE MODEL EXPLAINS:

- MIXTURE AND REACTION OF PRECURSOR FLOWS
- GREY DIFFUSE RADIATION
- CONJUGATED HEAT TRANSMISSION

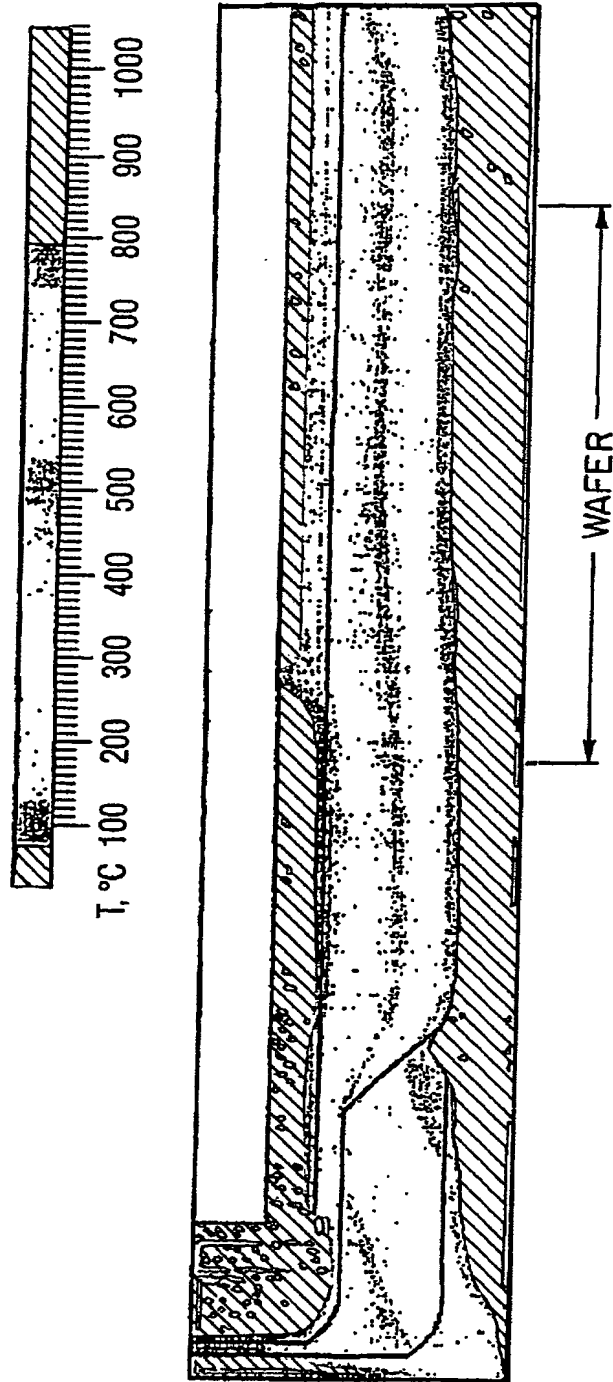


FIG. 3b

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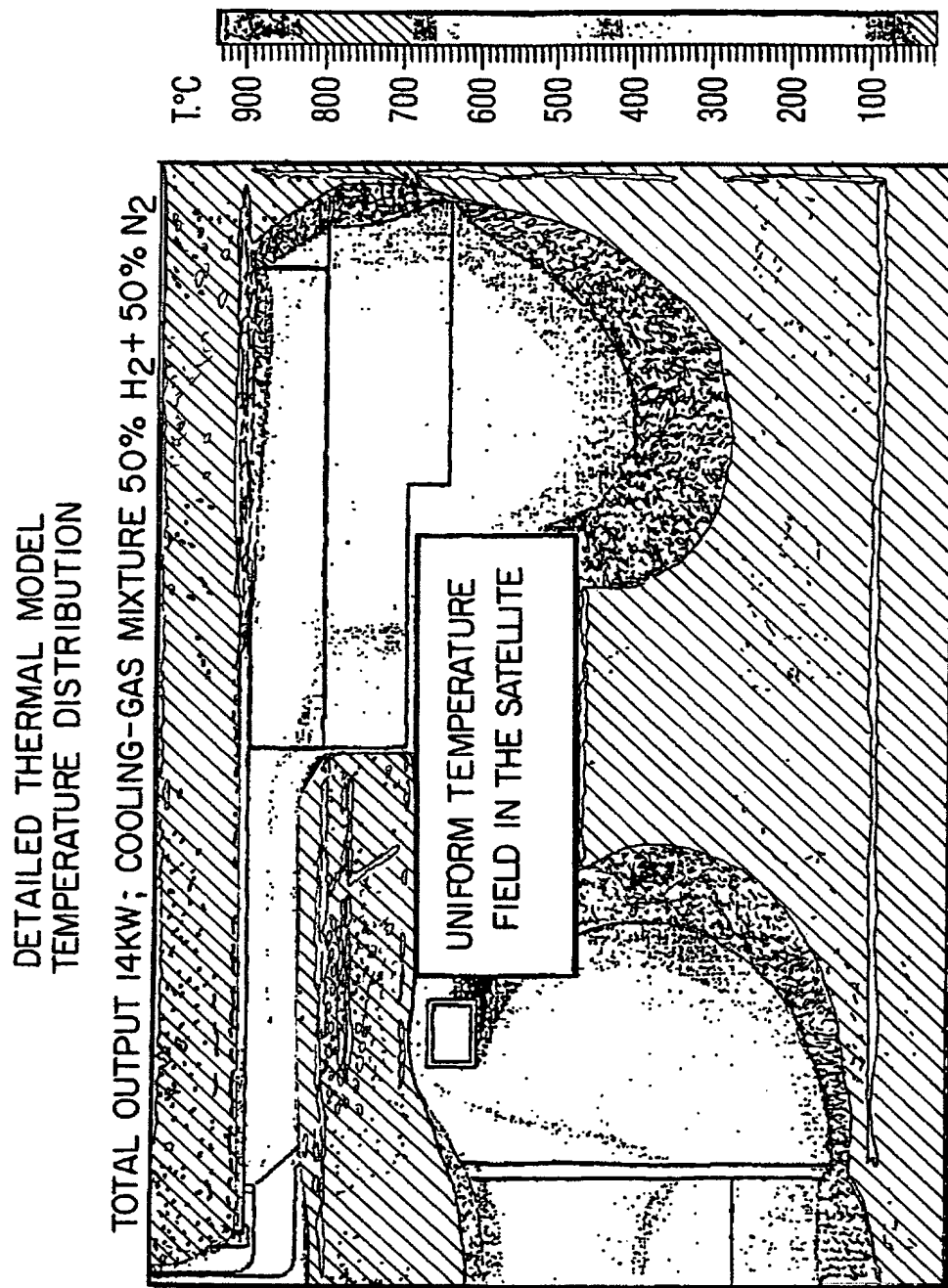


FIG. 3c

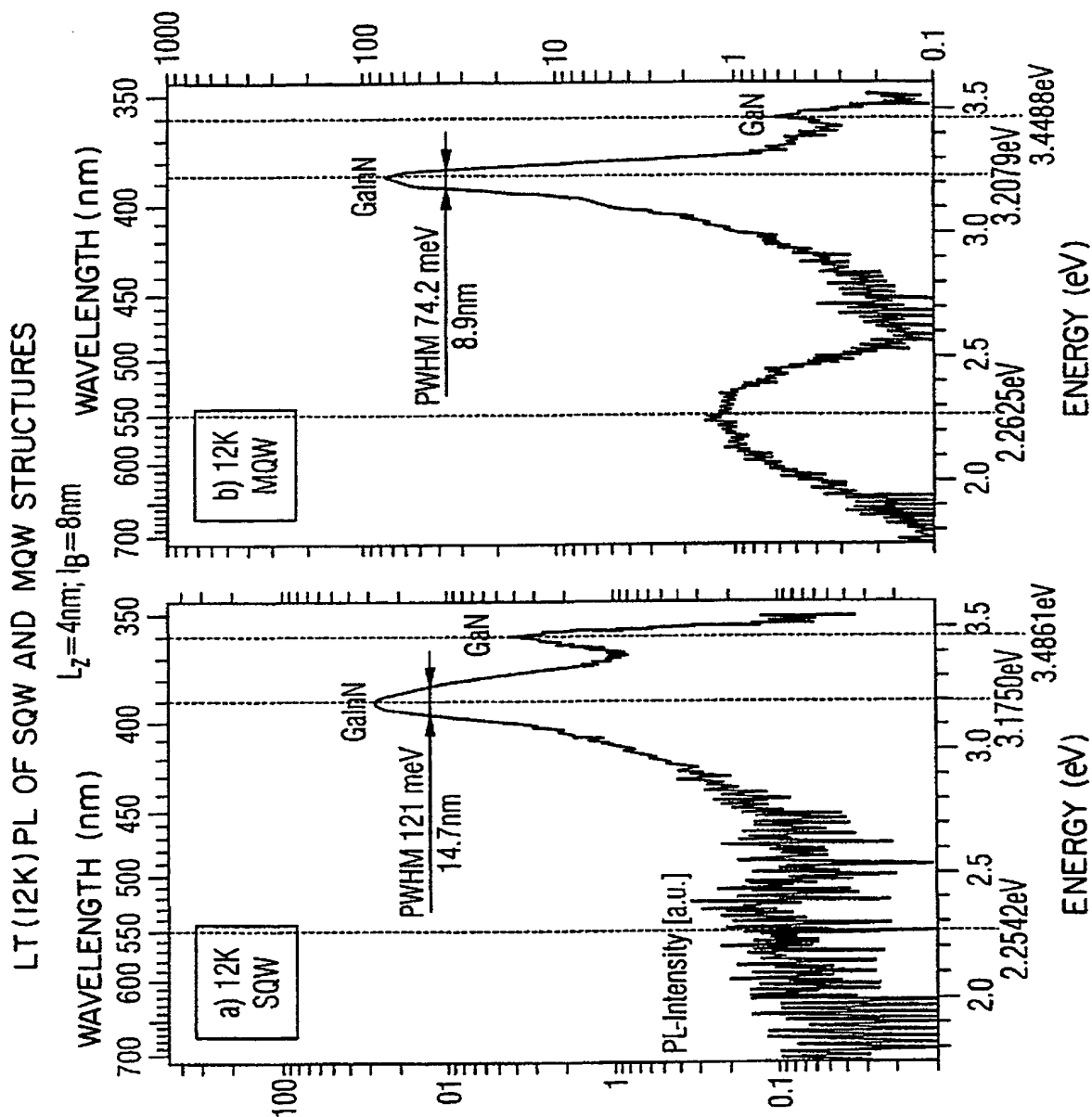


FIG. 4

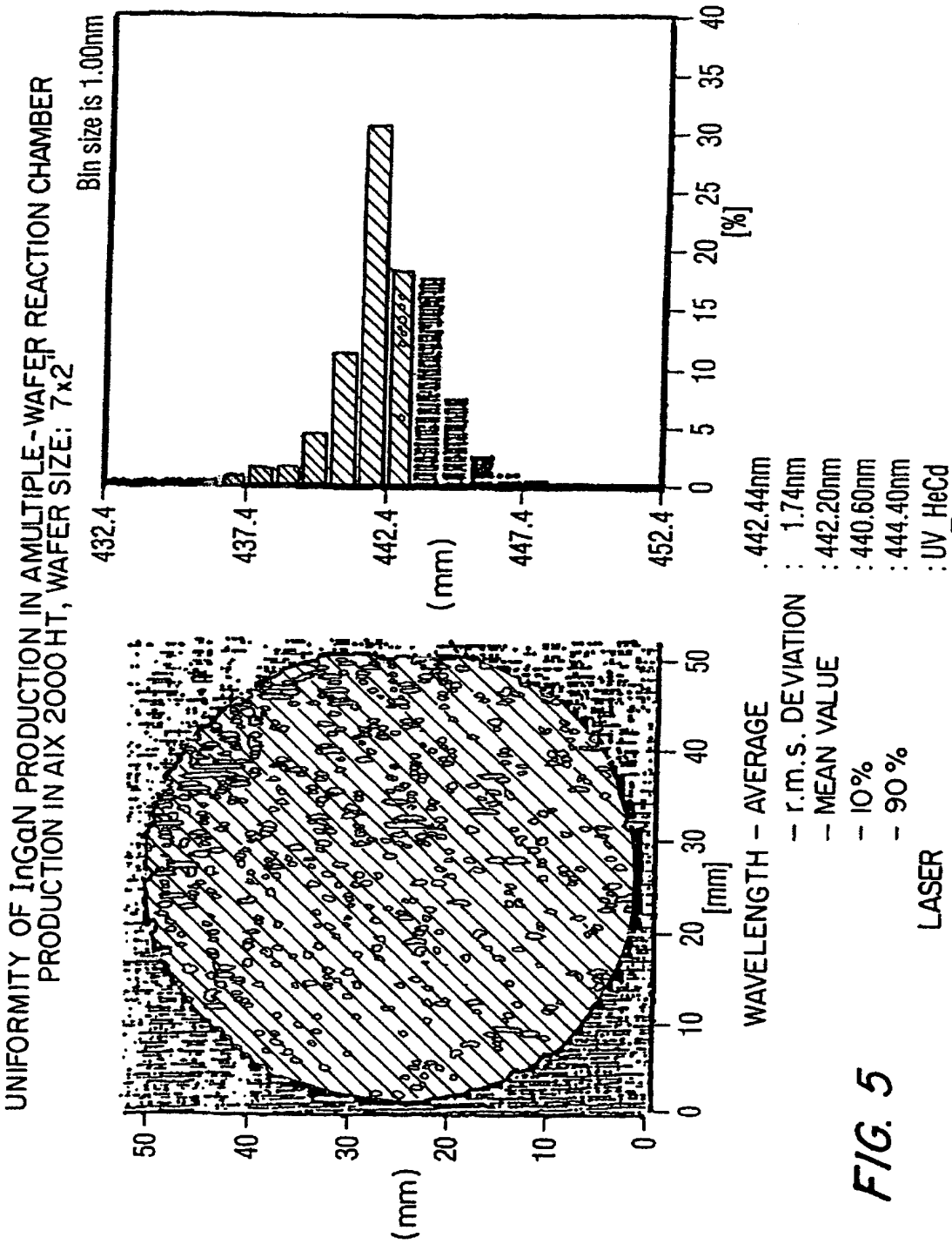
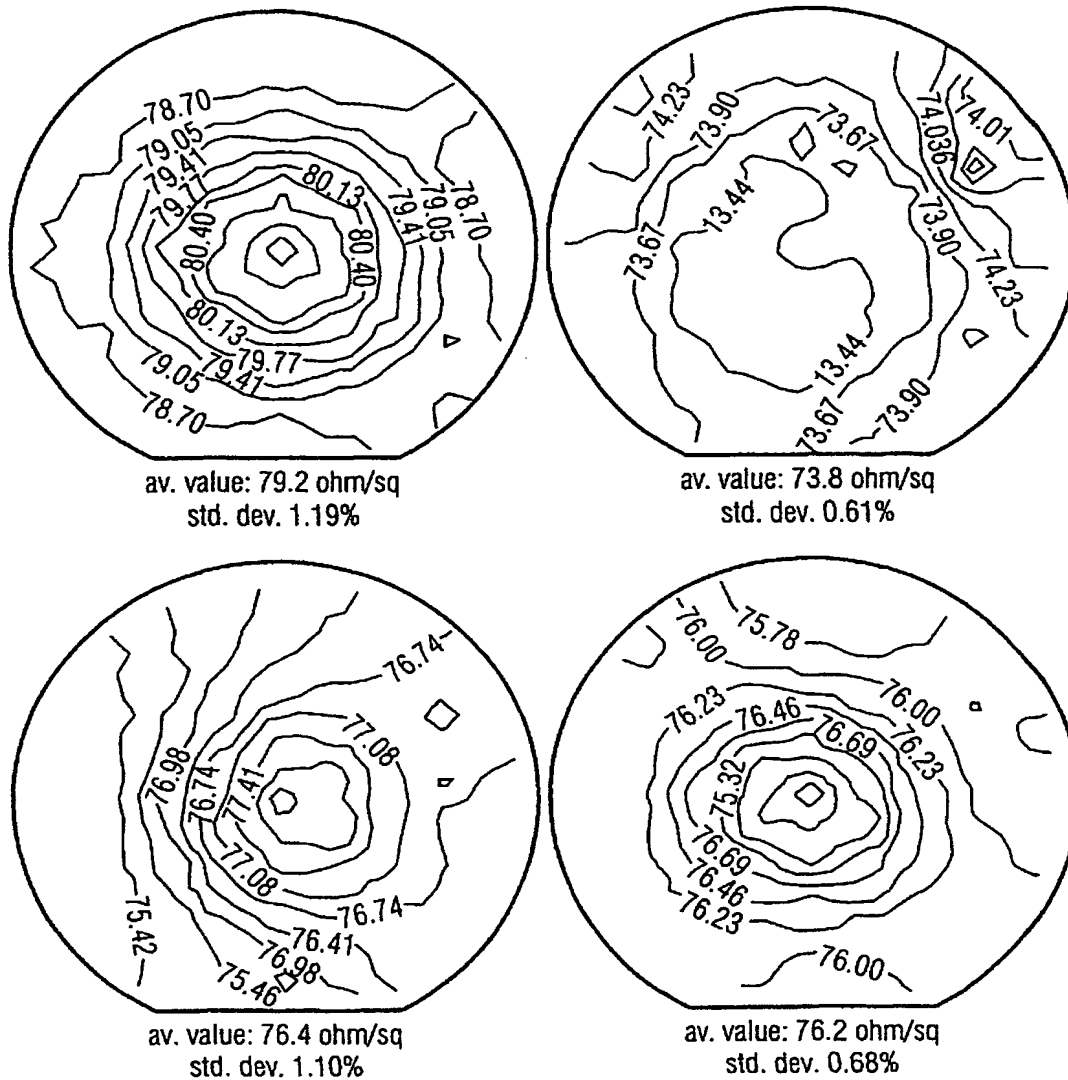


FIG. 5



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WAFER TO WAFER HOMOGENEITY OF n-DOPED  
GaN/InGaN-DHS



WAFER TO WAFER r. m. s. DEVIATION: 2,7 %

**FIG. 6**

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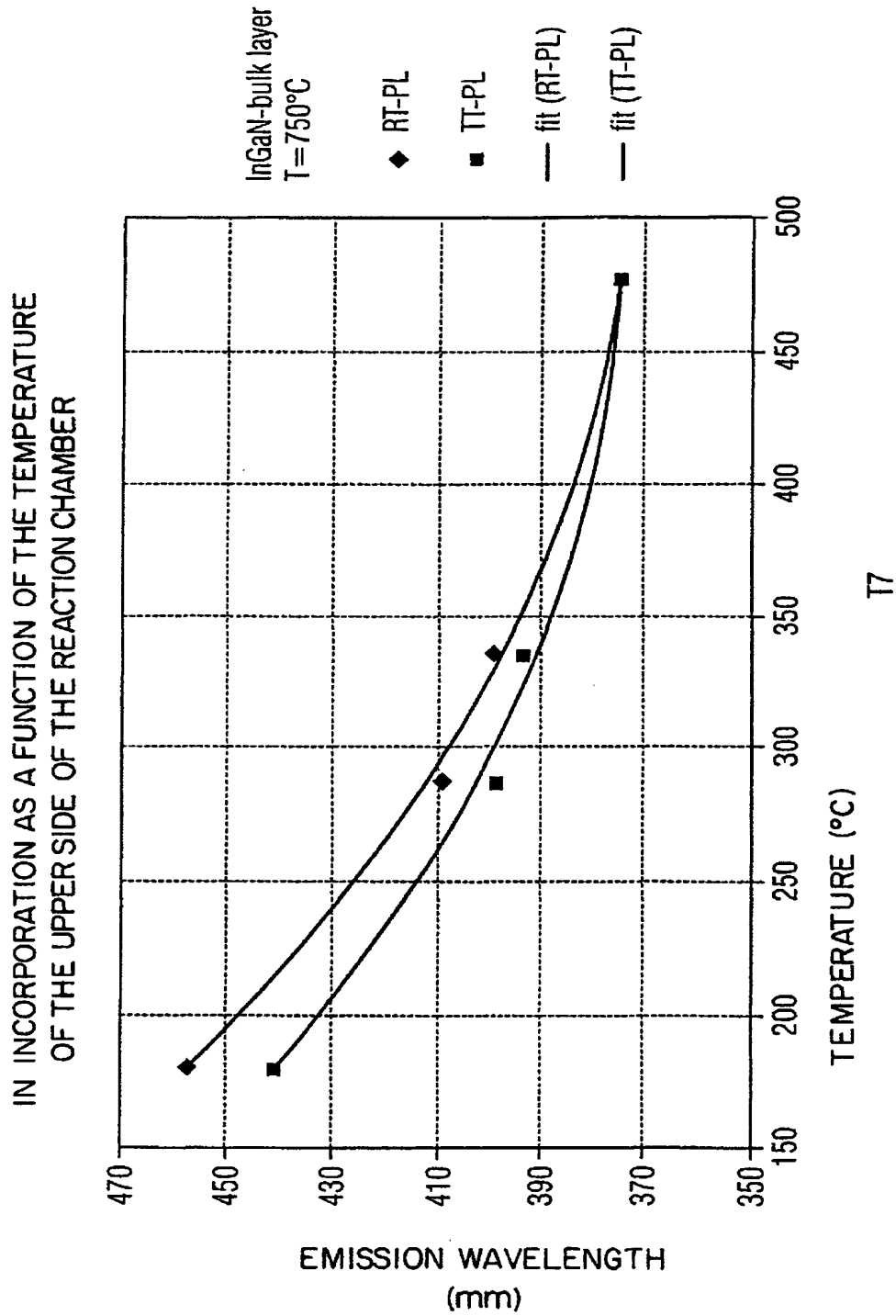


FIG. 7

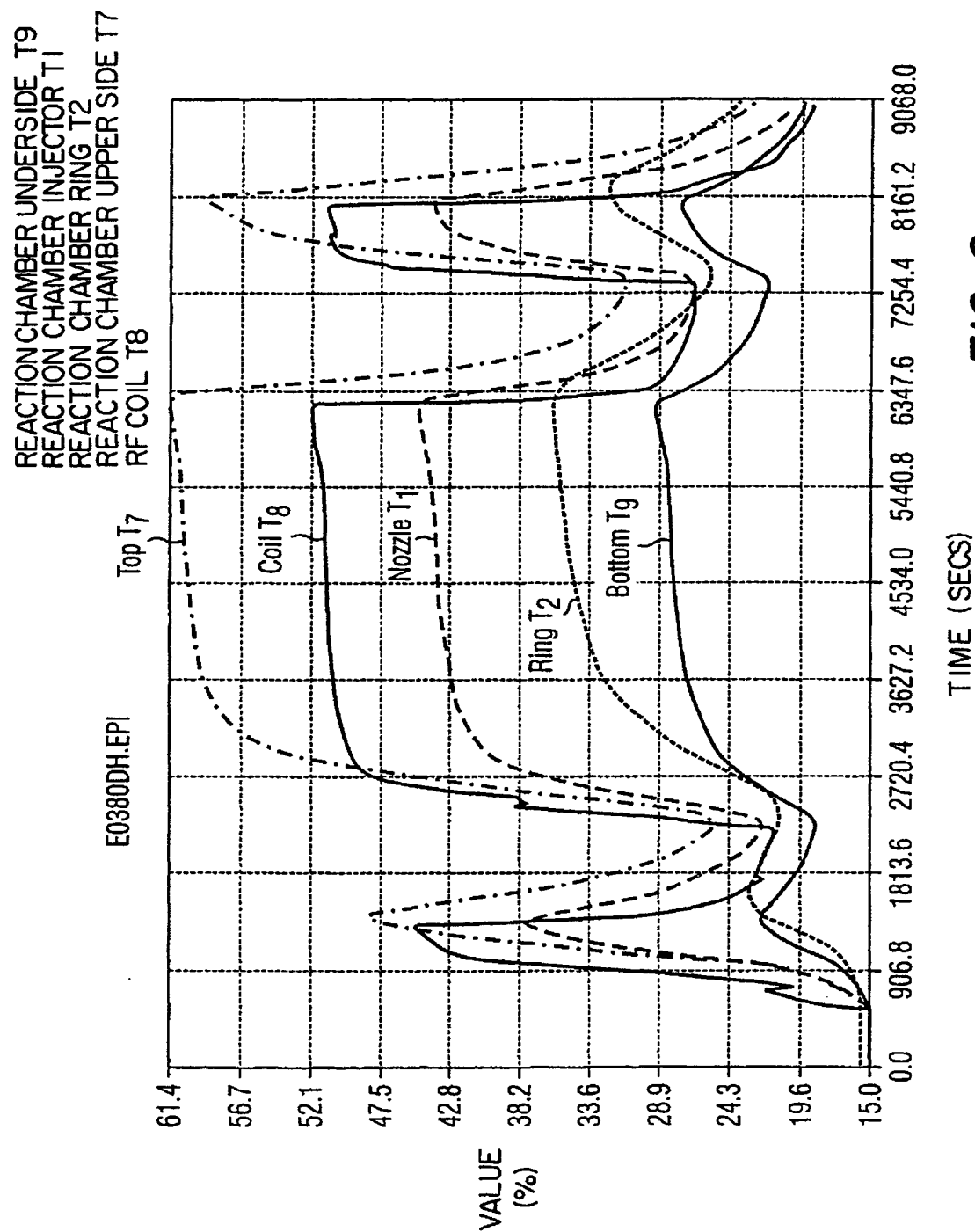


FIG. 8